

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: January 17, 1992

SUBJECT: Preliminary Assessment/Visual Site Inspections

FROM: Kevin Pierard, Chief *K. Pierard*
OH/MN Technical Enforcement Section

TO: Richard Traub, Chief
Michigan Permitting Section

Attached is the following Preliminary Assessment/Visual Site Inspection
for your files:

Sperry Vickers (Inland Fischer Guide)

GMC
MID 985 569 920

The Executive Summary and Conclusions and Recommendations sections are
"enforcement confidential", and therefore, should not be released to the
public.

If you have any questions, please contact me at (312) 886-4448.

Attachments



U.S. Environmental Protection Agency
Office of Waste Programs Enforcement
Contract No. 68-W9-0006



TES 9

**Technical Enforcement Support
at Hazardous Waste Sites
Zone III
Regions 5,6, and 7**

prc

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**PRELIMINARY ASSESSMENT/
VISUAL SITE INSPECTION**

**SPERRY VICKERS, INC.
MID 001 722 552
(CURRENTLY, INLAND FISCHER GUIDE
DIVISION OF GENERAL MOTORS CORPORATION)
MID 985 569 920
TROY, MICHIGAN**

FINAL REPORT

Prepared for

**U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460**

Work Assignment No.	:	R05032
EPA Region	:	5
Site No.	:	MID 001 722 552
Date Prepared	:	January 10, 1991
Contract No.	:	68-W9-0006
PRC No.	:	209-R05032MI10
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EXECUTIVE SUMMARY

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PRC Environmental Management, Inc. (PRC), performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the Sperry-Vickers, Inc. (Sperry-Vickers) facility in Troy, Michigan. Sperry-Vickers no longer operates on the site property. Currently, the Inland Fischer Guide Division of General Motors Corporation (GM) operates a research and development (R&D) facility on the property. This report summarizes the results of the PA/VSI and evaluates the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified.

The Sperry-Vickers facility conducted research and development activities on pumps and valves at the site from 1956 until 1989 under ID No. MID 001 722 552. It generated waste solvents (F001, F003, and D001) resulting from parts cleaning and waste oil resulting from pump and valve manufacturing. GM began operating the facility in 1989, and currently conducts research and development on foam for automobile seat cushions and on plastic parts for automobile interiors. It also conducts fatigue tests on auto parts such as doors and trunks. The GM facility generates five waste streams: (1) waste solvents (D001, F001, F002, and F003) generated during parts cleaning of the foam manufacturing presses; (2) used paper towels and gloves containing 1,1,1-trichloroethane (F001) generated during the stereolithographic production of plastic parts; (3) rags containing isocyanates (F003, D003) generated during foam production; (4) waste oil generated from foam manufacturing presses; and (5) scrap foam, plastic, metal, and fiber glass generated from fatigue testing of parts.

GM has operated at the site since 1989. The building was erected in 1956 for Sperry-Vickers, who occupied it until 1989. The building was vacant for several months during renovation prior to GM occupancy. The building occupies 4.8 acres (222,000 square feet) of a 22 acre area, and manufacturing operations occupy 132,000 square feet inside the building which is located in an industrial and residential area. GM employs 613 people working one shift.

Sperry-Vickers became a large-quantity generator in 1986 (EPA, 1986), and the U.S. Environmental Protection Agency (EPA) acknowledged that Sperry-Vickers' EPA identification number was inactive in January 1990 (EPA, 1990). GM is currently regulated as a small-quantity generator under ID No. MID 985 569 920.

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The PA/VSI identified the following 11 SWMUs and one AOC at the facility:

Solid Waste Management Units

1. Indoor Solvent Accumulation Area
2. Waste Oil Drip Pans
3. Paper Towel Buckets
4. Dirty Rag Buckets
5. Outdoor Drum Storage Area
6. Former Indoor Waste Oil Accumulation Area
7. Former Empty Oil Drum Storage Area
8. Former Waste Oil Drip Pans
9. Former Waste Oil Underground Storage Tank
10. Former Satellite Solvent Accumulation Area
11. Scrap Metal, Plastics, and Foams Dumpster

Areas of Concern

1. Former Underground Fuel Oil Storage Tank Areas

The potential for a release to on-site soils and ground water from this facility is low to moderate because the facility was unable to produce documentation certifying clean closure of its Former Waste Oil Underground Storage Tank (SWMU 9) and its Former Underground Fuel Oil Storage Tank Areas (AOC 1). A release to on-site soils and ground water may have occurred prior to or during removal of the tanks. The potential for a release to surface water and air from this facility is low. SWMUs handling hazardous waste are located in enclosed areas on soundly constructed concrete with no visible cracks or gaps. Ground water is not used as a source of drinking water. The nearest surface water, the Rouge River, is situated about 3 miles west of the facility. The potential for release to air is low, because wastes containing volatile organic compounds are stored in closed drums.

The facility is completely fenced with barbed wire, and it employs a security guard in the parking lot 24 hours a day, 7 days per week. The nearest residence is approximately 1/4 mile to the east, and the nearest school is 1/2 mile southeast of the facility. According to the VSI and the U.S. Geological Survey topographical map, no forest preserves, no wetlands, no habitats of endangered species, and no other sensitive environments are located within 2 miles of the facility.

This facility poses a low to moderate threat of release via on-site soils and ground water. PRC recommends that the facility provide evidence that its Former Waste Oil Underground Storage Tank (SWMU 9) and its Former Underground Fuel Oil Storage Tank Areas (AOC 1) have undergone clean closure. If such documentation is unavailable, soil sampling for evidence of

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contamination should be conducted. If contaminants are detected in significant quantities, ground-water sampling should also be conducted.

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1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC), received Work Assignment No. R05032 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5.

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has generally exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading-unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a non-routine and nonsystematic basis. This includes any area where such a release in the future is judged to be a strong possibility.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility
- Obtain information on the operational history of the facility
- Obtain information on releases from any units at the facility
- Identify data gaps and other informational needs to be filled during the VSI

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA
- Identify releases not discovered during the PA
- Provide a specific description of the environmental setting
- Provide information on release pathways and the potential for releases to each medium
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases

The VSI includes interviewing appropriate facility staff, inspecting the entire facility to identify all SWMUs and AOCs, photographing all SWMUs, identifying evidence of releases, initially identifying potential sampling locations, and obtaining all information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the former Sperry-Vickers, Inc. (Sperry-Vickers) facility in Troy, Michigan. The facility is currently operated by the Inland Fischer Guide Division of General Motors (GM). The PA was completed on November 19, 1991. PRC gathered and reviewed information from the Michigan Department of Natural Resources (MDNR) and from EPA Region 5 RCRA files. PRC also reviewed relevant documentation from the U.S. Department of Agriculture (USDA), United States Geological Survey (USGS), U.S. Department of Commerce (DOC), and the National Oceanic and Atmospheric Administration (NOAA).

The VSI was conducted on November 21, 1991. It included interviews with facility representatives and a walk-through inspection of the facility. Eleven SWMUs and one AOC were identified at the facility.

The VSI is summarized and 12 inspection photographs are included in Attachment A. Field notes from the VSI are included in Attachment B.

2.0 FACILITY DESCRIPTION

This section describes the facility's location, past and present operations (including waste management practices), waste generating processes, release history, regulatory history, environmental setting, and receptors.

2.1 FACILITY LOCATION

The facility is located at 1401 Crooks Road in Troy, Oakland County, Michigan (latitude 42° 32' 43" north and longitude 83° 10' 36" west) (Figure 1). The facility is approximately 18 miles north of downtown Detroit, Michigan. The building occupies 4.8 acres (222,000 square feet) of a 22 acre area, and manufacturing operations occupy 132,000 square feet inside the building which is located in an industrial and residential area.

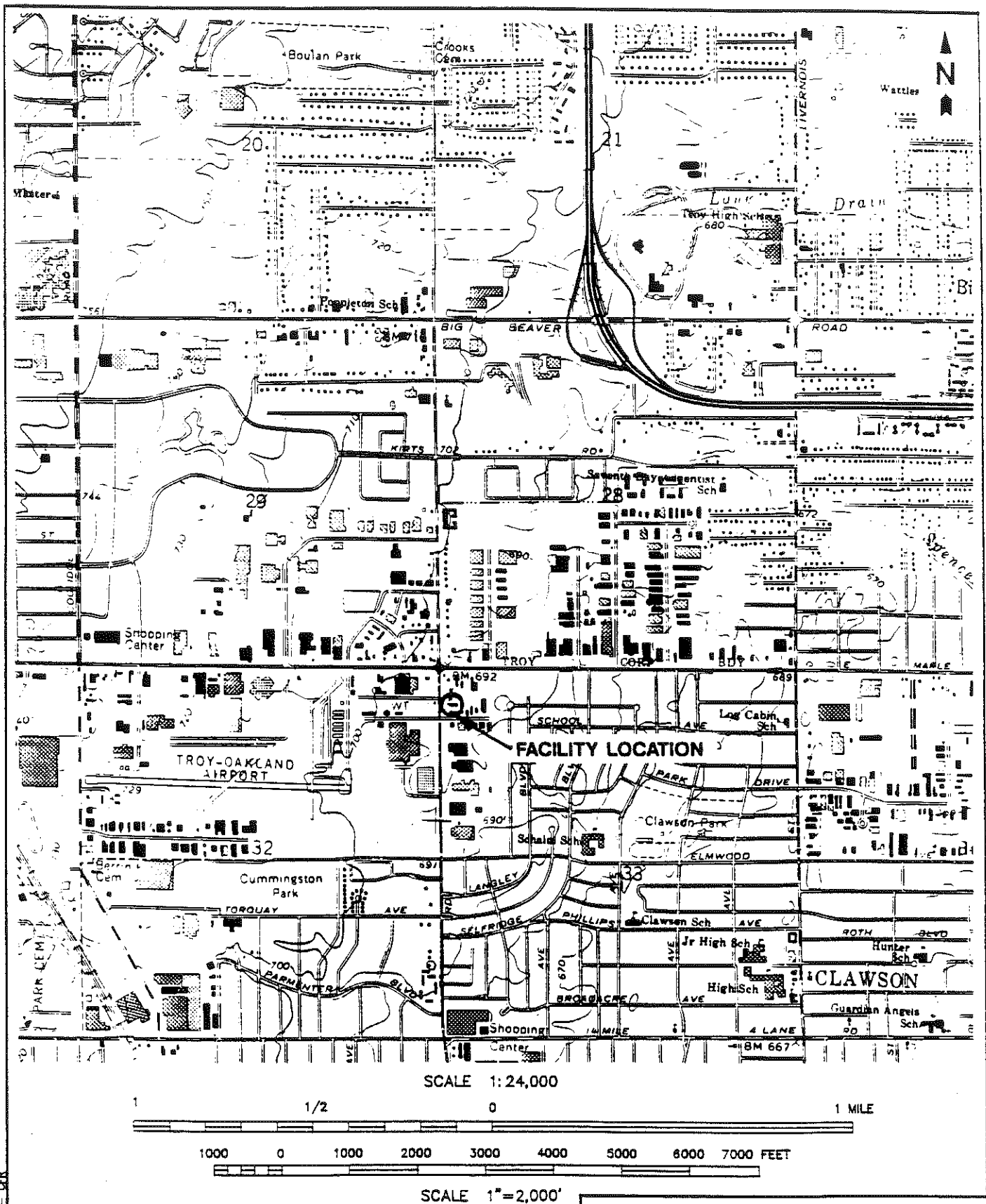
The facility is bordered on the north by an office building, on the west by the Troy-Oakland Airport, on the south by the Fischer Body Division of GM, and on the east by an office building.

2.2 FACILITY OPERATIONS

Sperry-Vickers operated the facility from 1956 until 1989. It conducted research and development on manufacturing of pumps and valves. It generated 2 known waste streams: waste oil and waste solvents (F001, F003, D001). The facility was vacant for several months during remodeling. Inland Fischer Guide Division of GM has operated the facility since 1989, and currently employs 613 people. GM manufactures foam to be used in automobile seat cushions and plastic parts for automobile interiors. Facility SWMUs are identified in Table 1. The facility layout, including SWMU locations, is shown in Figure 2.

2.3 WASTE GENERATING PROCESSES

The primary waste streams currently generated at the GM facility include (1) waste solvents (D001, F001, F002, F003) generated during parts cleaning of the foam manufacturing presses; (2) used paper towels and gloves containing trichloroethane (F001) generated during the stereolithographic production of plastic parts; (3) rags containing isocyanates (F003, D003) generated during foam production; (4) waste oil generated from foam manufacturing presses; and (5) scrap foam, plastic, metal, and fiber glass generated from fatigue testing of parts (See Table 2). Sperry-Vickers generated two known waste streams: waste solvents (F001, F003, and



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FIGURE 1
FACILITY LOCATION

PNC ENVIRONMENTAL MANAGEMENT, INC.

SPERRY-VICKERS - 12/04/91 - GCR

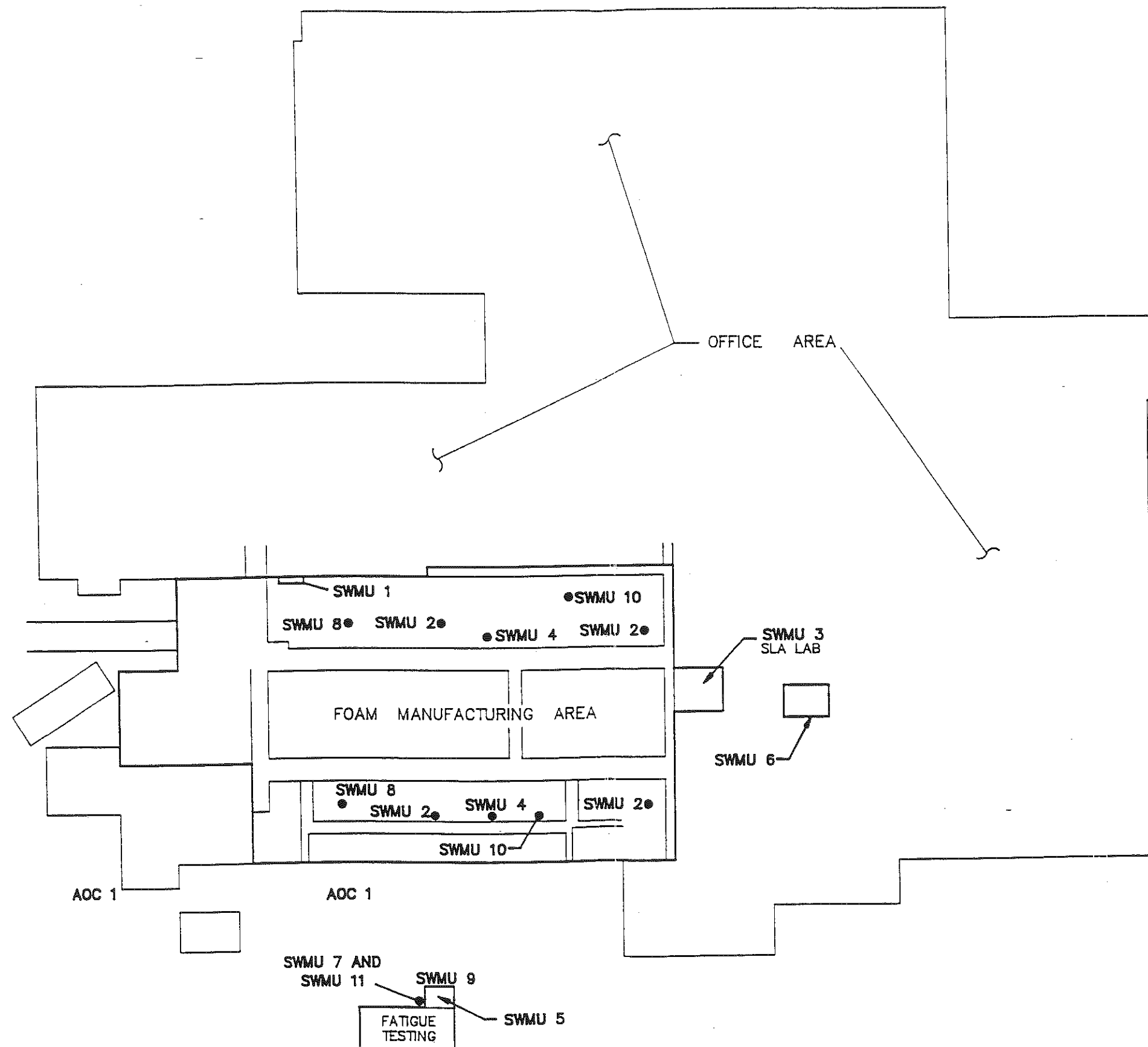
SOURCE: ADAPTED FROM USGS, STEVENSVILLE QUADRANGLE, 1970

TABLE 1
SOLID WASTE MANAGEMENT UNITS (SWMU)

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit*	Status
1	Indoor Solvent Accumulation Area	No	Active
2	Waste Oil Drip Pans	No	Active
3	Paper Towel Buckets	No	Active
4	Dirty Rag Buckets	No	Active
5	Outdoor Drum Storage Area	Yes	Closed, currently less than 180-day storage
6	Former Indoor Waste Oil Accumulation Area	No	Inactive
7	Former Empty Oil Drum Storage Area	No	Inactive
8	Former Waste Oil Drip Pans	No	Inactive
9	Former Waste Oil Underground Storage Tank	Yes	Inactive
10	Former Satellite Solvent Accumulation Area	No	Inactive
11	Scrap Metal, Plastics, and Foams Dumpster	No	Active

Note:

* A RCRA hazardous waste management unit is one that currently requires or formerly required a RCRA Part A or Part B permit.



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FIGURE 2

FACILITY LAYOUT

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NOT TO SCALE

SPERRY-2.DWG - 12/10/91 - QCR

SOURCE: MODIFIED FROM INLAND FISCHER GUIDE DIVISION OF GENERAL MOTORS SKETCH, 1991

TABLE 2
SOLID WASTES

<u>Waste/EPA Waste Code</u>	<u>Source</u>	<u>Primary Management Unit*</u>
Solvents/F001, F002, F003, D001	Currently parts cleaning after foam manufacturing; formerly, parts cleaning of pump and valve manufacturing machines	SWMU 1 and 5; formerly 10
Paper towels and gloves/F001	Stereolithographic production of plastic parts	SWMU 3 and 5
Rags/F003, D003	Foam manufacturing	SWMU 4
Waste Oil/NA*	Foam manufacturing; formerly from pump and valve manufacturing machines	SWMU 2 and 5; formerly 6, 7, 8, and 9
Scrap metal, plastics, and foams/NA*	Fatigue testing of parts	SWMU 11

Notes:

- * Primary Management Unit refers to SWMU that currently manages the waste.
- ** Not Applicable (NA) designates nonhazardous waste.

D001) resulting from parts cleaning and waste oil from pump and valve manufacturing (Table 2).

Waste solvents (F001, F002, F003, D001) are generated during parts cleaning of the foam manufacturing presses. Raw polyall and raw cyanates are pumped into lines where a reaction takes place and foam is formed. The foam is transferred via the lines to a mold and a cushion is made. Because this is a research and development facility, amounts and types of polyalls and cyanates vary. The facility cleans the molds with solvents before adding additional raw materials. A small amount of either 1,1,1-trichloroethane or methylene chloride is poured from a 55-gallon drum into a bucket. The mold is cleaned inside of the bucket. The waste solvent is transferred, using a funnel, into a 55-gallon drum at the Indoor Solvent Accumulation Area (SWMU 1). Once the drum is full, it is transferred to the Outdoor Drum Storage Area (SWMU 5) where it is stored for less than 180 days while it awaits removal by Chemical Waste Management of Southfield, Michigan. Approximately 55 gallons of waste solvent is generated each year.

In the stereolithographic apparatus (SLA) lab, small plastic parts such as door handles are manufactured using a photocurable polymer resin and a catalyst. Ultraviolet (UV) light is passed through the plastic to harden it. The part is built by adding successive layers of plastic on top of each other. Once the part is completely built, it is 95 percent hardened and cleaned in a bath of 1,1,1-trichloroethane. All of the parts are placed by hand into a small 1,1,1-trichloroethane tub. Gloves worn by the lab technician and paper towels used in the lab are placed into a vented bucket (SWMU 3). Once this bucket is full, the waste is transferred to a larger plastic Paper Towel Bucket (SWMU 3) 6 feet from the vented bucket. When the larger plastic bucket is full, the waste is double-bagged and placed inside a 55-gallon drum in the Outdoor Drum Storage Area (SWMU 5). After the plastic part is cleaned, it is placed inside a UV light oven to harden completely. Approximately 330,000 gallons of waste paper and gloves is generated each year.

Rags are collected in closed-top buckets placed throughout the facility (SWMU 4). Rags may contain isocyanates (F003, D003) if they are used to wipe up spills during foam manufacturing. When the individual buckets are full, the rags are removed by Chemical Waste Management of Southfield, Michigan. Approximately 330,000 gallons is generated each year.

Lubricating oil from the foam press machines is accumulated in Waste Oil Drip Pans (SWMU 2) placed beneath each machine. When the drip pans are full, the oil is transferred by Great Lakes Environmental, via a hose and placed into 55-gallon drums. The drums are stored in the Outdoor Drum Storage Area (SWMU 5) until they are removed by Chemical Waste Management of Southfield, Michigan. Approximately 440,000 gallons of waste oil is generated each year.

After fatigue tests are conducted on parts such as doors, trunks, and seats the used parts are discarded and collected in the Scrap Metal, Plastics, and Foams Dumpster (SWMU 11) prior to removal by Arro Disposal of Romulus, Michigan.

Sperry-Vickers manufactured pump and valve prototypes. Machines used to manufacture pumps and valves generated waste oil, which was collected in the Former Waste Oil Drip Pans (SWMU 8) placed beneath each machine. Waste oil was collected from the drip pans and transferred into 55-gallon drums. Up to six 55-gallon drums were collected in the Former Indoor Waste Oil Accumulation Area (SWMU 6). The 55-gallon drums were transferred to the area that is currently the Outdoor Drum Storage Area (SWMU 5) prior to removal. Before 1980, the waste oil was taken from the Former Indoor Waste Oil Accumulation Area (SWMU 6) and transferred into the Former Waste Oil Underground Storage Tank (UST) (SWMU 9), which was removed in 1980. Empty drums containing oil residue and small amounts of oil were stored in the Former Empty Oil Drum Storage Area (SWMU 7) prior to being sold to a drum recycler.

Parts from the manufacturing machines and manufactured parts were cleaned using solvents. Waste solvents (F001, F003, D001) were collected in 55-gallon drums at the Former Satellite Solvent Accumulation Area (SWMU 10). When the drums were full, they were transferred to the area that is currently the Outdoor Drum Storage Area (SWMU 5) prior to removal.

Quantities of wastes generated by Sperry-Vickers and the haulers it used could not be obtained through either the PA or the interview with the Sperry-Vickers representative.

2.4 HISTORY OF DOCUMENTED RELEASES

No releases from this facility have been documented.

2.5 REGULATORY HISTORY

Sperry-Vickers filed a RCRA Part A permit application for the facility on November 12, 1980 (Sperry-Vickers, 1980). PRC found no documentation regarding a Notification of Hazardous Waste Activity for the Sperry-Vickers facility. The 1980 Part A permit application covered 5,000,000 gallons of tank storage (S02) and 7,500,000 gallons of container storage (S01) for the following wastes: F001, F002, F003, D001, D002, D003 U228, U239, U002, U220, U019, U031, U044, U112, U196, U154, U169, and P106. On June 10, 1982, Sperry-Vickers received a letter from EPA acknowledging receipt of the Part A application and granting permission to

operate under interim status (EPA, 1982). Sperry-Vickers received the number MID 001 722 522.

In July 1982, Sperry-Vickers acknowledged through a letter from its waste hauler that the hauler, Usher Oil, improperly transported and manifested one 55-gallon drum of waste oil. No action was taken by MDNR or by EPA regarding this impropriety.

On December 19, 1983, the facility notified EPA of a change in ownership of Sperry-Vickers, a wholly-owned subsidiary of the Sperry Corporation, to Libbey-Owens-Ford Company. The name of the owner-operator of the facility was then changed to Sperry-Vickers, Incorporated (Sperry-Vickers, 1983). At the same time the facility submitted a revised RCRA Part A permit application to the EPA reflecting the change in ownership (Sperry-Vickers, 1983).

On July 26, 1984, Sperry-Vickers submitted another revised RCRA Part A permit application that removed its previously listed tank storage (S02). The facility anticipated using a 7,500-gallon tank as a storage container. According to facility correspondence, the 7,500-gallon tank was never used to store hazardous waste of any kind and was removed from the Part A permit application. Since 1980, all waste has been stored in 55-gallon drums. The facility also removed three wastes (F002, U228, and D002) that were previously listed, because those wastes were no longer generated (Sperry-Vickers, 1984a).

On July 31, 1984, the facility requested withdrawal of its interim status as a RCRA treatment, storage, or disposal (TSD) facility and notified EPA of its intent to operate only as a generator of hazardous waste (Sperry-Vickers, 1984b). On June 10, 1985, Sperry-Vickers submitted a certification of closure of the Outdoor Drum Storage Area (SWMU 5) and a completed Request for Change of Status form to the EPA (Sperry-Vickers, 1985). On October 3, 1985, MDNR conducted a compliance evaluation inspection and found the facility to be in compliance with RCRA at the time of the inspection (MDNR, 1985a). On October 18, 1985, MDNR recommended that the facility be granted a change from interim status as a RCRA TSD (MDNR, 1985b). On March 24, 1986, EPA accepted Sperry-Vickers' certification of closure and approved its request for a change in status to a large quantity generator (EPA, 1986). On January 19, 1990, Sperry-Vickers notified EPA and MDNR that it would no longer need an EPA identification number because it moved its operation to a new location. According to the 1990 letter, all waste was removed from the facility prior to the departure of Sperry-Vickers (Sperry-Vickers, 1990). EPA responded on January 20, 1990, informing the facility that its number would be coded inactive and instructed it not to use the number without notifying the agency (EPA, 1990).

MDNR Air Quality Division inspected Sperry-Vickers once in 1976, and again in 1981. Both inspections found the facility to be in compliance (MDNR, 1976 and 1981).

On August 18, 1989, GM filed a Notification of Hazardous Waste Activity with EPA and received an EPA identification number which was different than Sperry-Vickers' number (GM, 1989). The current GM number for the facility is MID 985 569 920. Between 1980 and August, 1989, the facility operated with ID number MID 001 722 552; since August, 1989, the facility has operated with ID number MID 985 569 920. During the VSI, facility representatives stated that GM is currently regulated as a small-quantity generator of hazardous waste, and that its applications for numerous air permits were received by MDNR on May 16, 1990. The facility holds no other current operating permits.

2.6 ENVIRONMENTAL SETTING

This section describes the climate, flood plain and surface water, geology and soils, and ground water in the vicinity of the facility.

2.6.1 Climate

The climate of Troy, Michigan is influenced by the Great Lakes and is characterized as mild. Rainfall averages 32 inches per year. Lake evaporation averages 30 inches per year (U.S. DOC, 1968). The net precipitation is approximately 2 inches. The 1-year, 24-hour rainfall value is between 2 and 2.5 inches (U.S. DOC, 1963). The average temperature is 58.0°F. The average low temperature is 22.0°F in January, and the average high temperature is 72.2°F in July. The prevailing wind is from the southwest and averages 9 miles per hour during the summer and 12 miles per hour in the winter (NOAA, 1989).

2.6.2 Flood Plain and Surface Water

The facility is at an approximate elevation of 690 feet above mean sea level. It is situated about 3 miles east of the Rouge River at its closest point. The Rouge River is a tributary to the Grand River, which discharges to Lake Michigan (Water Resources Data, 1988). The facility is approximately 4-1/2 miles southeast of Vhay Lake and 4 miles southeast of Endicott and Cranbrook Lakes. Surface drainage in the overall area of the site appears to be in a west-southwesterly direction towards Rouge River. The site locale is classified as a Zone C flood plain area, indicating that it is an area of minimal flooding outside the 500-year flood plain.

2.6.3 Geology and Soils

No site-specific geological characterization of the facility is available. However, the general topography of Oakland County can be characterized as glacial terrain consisting of small lakes, hills, and depressions. The southeastern corner of the county consists of a nearly level glacial lake plain. The rest of the county consists of two gently undulating to very hilly end moraine bands separated by three major outwash plains (USDA, 1982).

Surficial geology in Oakland County is characterized by glacial till deposits of the Wisconsin Age. In the southeastern corner of the county, hills are nearly level to gently sloping and are sandy, loamy, or clayey throughout (USDA, 1982). Soil at the site is described as Urban Land and is characterized by nearly level and sloping land that is almost completely covered by buildings or other structures. Exposed soils are sandy or clayey (USDA, 1982).

Bedrock underlying glacial till in the northern portion of the county consists of the Marshall Formation characterized by white, gray, and red, very fine-grained to coarse-grained sandstone; and Cold-Water Shale described as blue to light gray shale. Bedrock in the southern portion of the county consists of the Berea Formation, described as sandstone that is light gray, dolomite, and shaley; and black to brown antrim shale. Of the two formations, the Marshall Formation appears to offer a consistently reliable source of water (Twenter and Knutilla, 1972).

2.6.4 Ground Water

No hydrogeologic characterization of the facility is available. However, the aquifer in the Troy area is a sand and gravel aquifer of the Pleistocene age with a water level approximately 26 feet below land surface (Water Resources Data, 1988). The closest private ground-water well to the facility is approximately 2-1/2 miles northwest of the site; it is 111 feet deep (Oakland County Health Department, 1991).

2.7 RECEPTORS

The facility is located along Crooks Road in an industrial and residential area in Troy, Michigan, which is approximately 18 miles north of downtown Detroit, Michigan. Troy has a population of about 64,900.

The facility is bordered on the north by an office building, on the west by the Troy-Oakland Airport, on the south by Fischer Body division of GM, and on the east by an office

building. The nearest school, Schalm School, is located about 1/2 mile southeast of the facility. Facility access is controlled by a barbed wire fence and guard in the parking lot 24-hours a day, 7 days a week.

The nearest surface water body, the Rouge River, is located about 3 miles west of the facility and is used for industrial purposes. The Rouge River is a tributary to the Grand River which discharges to Lake Michigan (Water Resources Data, 1988). Other surface water bodies in the area include Vhay Lake, Cranbrook Lake, and Endicott Lake located between 4 and 4-1/2 miles northwest of the facility.

Ground water is not used as a source of drinking water. Drinking water in Troy is purchased from the City of Detroit. Detroit's drinking water is treated by a municipal water system. The closest private ground-water well to the facility is approximately 2-1/2 miles northwest of the site. This well is located downgradient of the facility.

The nearest wetland is located approximately 5 miles north of the facility. The Troy-Oakland Airport is directly west of the site. According to the information obtained at the time of the VSI and from the USGS topographic map, no forest preserves, no wetlands, no habitats of endangered species, and no other sensitive environments are located within 2 miles of the facility.

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the 11 SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of release, and PRC observations.

SWMU 1

Indoor Solvent Accumulation Area

Unit Description:

This unit consists of an indoor area approximately 25 feet by 15 feet in the northeast corner of the foam manufacturing area, directly south of Shipping and Receiving (see Photograph No. 1). Waste solvent generated from parts cleaning of the foam manufacturing presses is accumulated in 55-gallon drums, which are kept closed and labeled as hazardous waste.

Date of Startup:

This unit began operation in 1989.

Date of Closure:

This unit is currently operational.

Wastes Managed:

This unit manages waste solvents (F001, F002, F003, D001) generated during parts cleaning of the foam manufacturing presses.

Release Controls:

This unit is located inside a building that has an epoxy-sealed, concrete floor with no visible cracks or gaps. No drains were located within 500 feet of the unit.

History of Documented Releases:

No releases from this unit have been documented.

Observations:

One partially full 55-gallon drum was in the area at the time of the VSI. It appeared to be in sound condition. PRC observed no visible evidence of release.

SWMU 2

Waste Oil Drip Pans

Unit Description:

This unit consists of 15-foot by 10-foot by 2-inch-high metal pans placed beneath each of the foam manufacturing presses to collect waste oil (see Photograph No. 2). These units are located in the eastern portion of the manufacturing area.

Date of Startup: This unit began operation in 1989.

Date of Closure: These units are currently operational.

Wastes Managed: This unit manages nonhazardous waste oil from the foam manufacturing presses.

Release Controls: These units are located inside a building that has an epoxy-sealed, concrete floor with no visible cracks or gaps. No drains were located within 500 feet of the units.

History of Documented Releases: No releases from this unit have been documented.

Observations: The pans appeared to be in sound condition during the time of the VSI. PRC observed no visual evidence of release.

SWMU 3

Paper Towel Buckets

Unit Description: This unit consists of one metal, 10-gallon, closed and vented bucket (see Photograph No. 3) and one plastic, 20-gallon, closed-top bucket (see Photograph No. 4) both located inside the SLA lab at the far southern end of the manufacturing area. Used gloves and paper towels containing 1,1,1-trichloroethane are first placed in the vented metal bucket. When that bucket is full, the waste is transferred to the closed-top plastic bucket, where it accumulates until it is double-bagged and placed into a 55-gallon drum in the Outdoor Drum Storage Area (SWMU 5) to await disposal.

Date of Startup: This unit began operation in 1989.

Date of Closure: This unit is currently operational.

Wastes Managed: This unit manages used gloves and paper towels containing 1,1,1-trichloroethane (F001) generated during the manufacture of small plastic parts.

Release Controls:	These buckets are located inside a building that has an epoxy-sealed, concrete floor with no visible cracks or gaps. No drains were located within 500 feet of the unit.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	Both buckets were closed at the time of the VSI. PRC observed no visual evidence of release.
<div style="display: flex; justify-content: space-between;"> <div style="width: 20%;">SWMU 4</div> <div>Dirty Rag Buckets</div> </div>	
Unit Description:	This unit is indoors and consists of metal, closed-top 5-gallon buckets placed throughout the manufacturing area. The buckets collect dirty rags generated from various manufacturing and research and development operations (see Photograph No. 5).
Date of Startup:	This unit began operation in 1989.
Date of Closure:	This unit is currently operational.
Wastes Managed:	This unit manages dirty rags (F003, D003) generated throughout the manufacturing area during the course of various manufacturing and research and development operations. Some rags may contain isocyanates from the cleanup of foam manufacturing operations.
Release Controls:	The buckets are located inside a building that has an epoxy-sealed, concrete floor with no visible cracks or gaps. Buckets are kept closed at all times.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	Buckets were closed at the time of the VSI. PRC observed no visual evidence of release.

SWMU 5**Outdoor Drum Storage Area**

Unit Description: This unit is an outdoor, roofed, 28-foot by 15-foot storage area (see Photograph Nos. 6 and 7). It is enclosed by 3 brick walls and a locked metal gate and has a concrete floor covered by metal grating. The unit is adjacent to a small building directly west of the main manufacturing and office building. The unit stores 55-gallon drums of waste from throughout the facility. Drums are placed directly on top of the metal grating while awaiting removal. Former practices were the same.

Date of Startup: This unit began operation in 1980.

Date of Closure: This unit was acknowledged closed, as a greater than 90-day storage area, by EPA on March 24, 1986 (EPA, 1986). It was then used as a less than 90-day storage area until the Sperry-Vickers facility vacated the property in 1989. The facility was vacant for several months during remodeling in 1989. GM began using the same area in 1989 as a less than 180-day storage area. The unit remains currently operational.

Wastes Managed: Currently, the unit manages waste solvents (D001, F001, F002, F003) generated from parts cleaning, waste oil generated from foam manufacturing, dirty rags (F003, D003) generated throughout the facility, and waste paper towels and gloves (F001) generated in the SLA lab. Formerly, the unit managed waste solvents (D001, F001, F003) generated from parts cleaning and waste oil generated during pump and valve manufacturing. It is unknown whether the facility stored any U-wastes in this area.

Release Controls: The unit is located on top of steel grating placed on top of concrete. The unit is outdoors but it is enclosed on three sides and the top and can hold 150 percent of the volume of a 55-gallon drum. Access to the drums is restricted by keeping the gate at the front of the unit locked at all times.

History of Documented Releases: No releases from this unit have been documented.

Date of Closure: This unit has been inactive since 1989, when Sperry-Vickers vacated the property.

Wastes Managed: This unit managed empty oil drums containing oil residue. Some drums contained small amounts of oil.

Release Controls: The unit was located on concrete.

History of Documented Releases: No releases from this unit have been documented.

Observations: At the time of the VSI, this area was occupied by the Scrap Metal, Plastics, and Foams Dumpster (SWMU 11).

SWMU 8 Former Waste Oil Drip Pans

Unit Description: This unit consisted of metal drip pans placed beneath each of the pump and valve manufacturing machines to collect waste oil. The manufacturing machines were located in approximately the same area that the foam manufacturing machines are currently located.

Date of Startup: This unit began operation in about 1956.

Date of Closure: This unit has been inactive since 1989, when Sperry-Vickers vacated the property.

Wastes Managed: This unit managed waste oil from pump and valve manufacturing machines.

Release Controls: The unit was located indoors on a concrete floor.

History of Documented Releases: No releases from this unit have been documented.

Observations: At the time of the VSI, it was not possible to determine exactly where these units had been located.

SWMU 9**Former Waste Oil Underground Storage Tank**

Unit Description: This unit consisted of a 5,000-gallon underground storage tank located directly north of the Outdoor Storage Area (SWMU 5) (see Photograph No. 10). The construction material of the tank is not known.

Date of Startup: This unit began operation in about 1956.

Date of Closure: According to the Sperry-Vickers representative, this unit was removed in 1980; however, no closure documentation is available.

Wastes Managed: This unit managed waste oil generated from pump and valve manufacturing machines.

Release Controls: PRC was unable to obtain any information on release controls at this unit.

History of Documented Releases: PRC was unable to obtain any information on history of releases at this unit.

Observations: At the time of the VSI, PRC observed a gravel filled area behind SWMU 5 where the unit was located.

SWMU 10**Former Satellite Solvent Accumulation Area**

Unit Description: This unit consisted of 55-gallon drums located indoors next to the pump and valve machines. The drums were used to collect spent solvent generated from parts cleaning of the manufacturing machines.

Date of Startup: This unit began operation in about 1956.

Date of Closure: This unit has been inactive since 1989, when Sperry-Vickers vacated the property.

Wastes Managed: This unit managed waste solvents (F001, F003, D001) generated during parts cleaning of the pump and valve manufacturing machines.

Release Controls: The unit was indoors on concrete floors.

History of Documented Releases: No releases from this unit have been documented.

Observations: At the time of the VSI, it was not possible to determine exactly where this unit had been located.

SWMU 11 Scrap Metal, Plastics, and Foams Dumpster

Unit Description: This unit consists of an outdoor, open-top, 20-cubic-yard dumpster located directly north of the Outdoor Drum Storage Area (SWMU 5) (see Photograph No. 9).

Date of Startup: This unit began operation in 1989.

Date of Closure: This unit is currently operational.

Wastes Managed: This unit manages scrap metal, plastics, and foams generated from fatigue testing of parts.

Release Controls: The unit is located on concrete.

History of Documented Releases: No releases from this unit have been documented.

Observations: The dumpster was approximately one-third full at the time of the VSI. PRC observed no visible evidence of release.

4.0 AREAS OF CONCERN

PRC identified one AOC during the PA/VSI. This is discussed below.

AOC 1 Former Underground Fuel Oil Storage Tank Areas

This AOC consists of two former 20,000-gallon underground fuel oil storage tank areas located north and west of the building, approximately 500 feet apart (see Photograph Nos. 11 and 12). According to Sperry-Vickers facility representative the tanks stored fuel oil from about 1956 until they were removed in 1986. However, there is no documentation detailing removal activities. A cursory visual inspection indicates that removal was completed. It is possible that a release may have occurred prior to or at the time of removal. Because no removal documentation was available, it is not known whether sampling was conducted at the time of removal. It is possible, therefore, that a release occurred and that it continues to affect on-site soils and possibly ground water.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified 11 SWMUs and 1 AOC at the Sperry-Vickers/GM facility. Background information on the facility's location, operations, waste generating processes, release history, regulatory history, environmental setting, and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, release history, and observed condition, is discussed in Section 3.0. AOCs are discussed in Section 4.0. Following are PRC's conclusions and recommendations for each SWMU and AOC. Table 3 identifies the SWMUs and AOCs at the Sperry-Vickers/GM facility and suggested further actions.

SWMU 1 Indoor Solvent Accumulation Area

Conclusions: This unit manages waste solvents (F001, F002, F003, D001) generated during parts cleaning of the foam manufacturing presses. The accumulation area is located indoors on a soundly-constructed, concrete floor. The probability of a release to the ground water, surface water, and on-site soils is low because the unit is located indoors, and a spill would not be likely to leave the building and migrate outdoors. The probability of a release to the air is low because the drums are stored closed at all times.

Recommendations: No further action is recommended at this time.

SWMU 2 Waste Oil Drip Pans

Conclusions: This unit manages nonhazardous waste oil from the foam manufacturing press machines. The pans are located indoors on a soundly-constructed, concrete floor. The probability of a release to ground water, surface water, and on-site soils is low because the unit is located indoors, and a spill would not be likely to leave the building and migrate outdoors. The probability of a release to the air is low because the oil does not contain volatile organic compounds.

Recommendations: No further action is recommended at this time.

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TABLE 3
SWMU AND AOC SUMMARY

<u>SWMU</u>	<u>Operational Dates</u>	<u>Evidence of Release</u>	<u>Suggested Further Action</u>
1. Indoor Solvent Accumulation Area	1989 - present	None	No further action at this time
2. Waste Oil Drip Pans	1989 - present	None	No further action at this time
3. Paper Towel Buckets	1989 - present	None	No further action at this time
4. Dirty Rag Buckets	1989 - present	None	No further action at this time
5. Outdoor Drum Storage Area	1980 - present	None	No further action at this time
6. Former Indoor Waste Oil Accumulation Area	1980 - 1989	None	No further action at this time
7. Former Empty Oil Drum Storage Area	1956 - 1989	None	No further action at this time
8. Former Waste Oil Drip Pans	Approximately 1956 - 1989	None	No further action at this time
9. Former Waste Oil Underground Storage Tank	Approximately 1956 - 1980	Unknown	Obtain documentation of clean closure. Conduct soil sampling. If contamination is detected at significant levels, conduct ground-water sampling.
10. Former Satellite Solvent Accumulation Area	Approximately 1956 - 1989	None	No further action at this time
11. Scrap Metal, Plastics, and Foams Dumpster	1989 - present	None	No further action at this time

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TABLE 3 (Cont.)
SWMU AND AOC SUMMARY

<u>AOC</u>	<u>Operational Dates</u>	<u>Evidence of Release</u>	<u>Suggested Further Action</u>
1. Former Underground Fuel Oil Storage Tank Areas	1956 - 1986	Unknown	Obtain documents detailing removal. Conduct soil sampling. If contamination is detected at significant levels, conduct ground water sampling.

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SWMU 4

Dirty Rag Buckets

Conclusions: These units manage dirty rags (F003, D003), containing isocyanates from foam production. The rags are generated throughout the manufacturing area during the course of various manufacturing and research and development operations. The buckets are located indoors on a soundly-constructed floor. Because of the indoor location of the unit and the inert nature of the waste, the potential for a release to on-site soils, ground water, and surface water is low. The probability of a release to the air is low, because the buckets are kept closed at all times.

Recommendations: No further action is recommended at this time.

SWMU 5

Outdoor Drum Storage Area

Conclusions: This unit currently manages waste solvents (D001, F001, F002, F003) generated from parts cleaning, waste oil generated from foam manufacturing, dirty rags (F003, D003) generated throughout the facility, and waste paper towels and gloves (F001) generated in the SLA lab. Formerly, the unit managed waste solvents (D001, F001, F003) generated from parts cleaning and waste oil generated from pump and valve manufacturing. The outdoor unit is enclosed on three sides and the top. The potential for a release to on-site soils, ground water, and surface water are all low. The probability of release migrating to any of these media is low because the unit is located on top of concrete and the three walls function as a partial berm. If a release were to escape from the front unwallled area, it would migrate onto concrete surrounding the unit. No drains are located nearby. The probability of a release to the air is low because drums are stored closed at all times.

Recommendations: No further action is recommended at this time.

SWMU 6

Former Indoor Waste Oil Accumulation Area

Conclusions: This unit managed waste oil generated during manufacturing of prototype pumps and valves. The unit is no longer used, and the current potential for release is nonexistent. The former potential for release to the ground water, surface water, and on-site soils was low, because the unit was

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indoors. A spill would not have been likely to leave the building and migrate outdoors. The probability of a release to the air was low, because the waste oil did not contain volatile organic compounds.

Recommendations: No further action is recommended at this time.

SWMU 7 Former Empty Oil Drum Storage Area

Conclusions: This unit managed empty oil drums that contained oil residue. Some drums contained small amounts of oil. The storage area is no longer in use, and the current potential for release is nonexistent. The former potential for release to on-site soils, ground water, and surface water was low. The unit was located on concrete and any releases would have occurred onto the concrete. No exposed soils or drains are located nearby, limiting the potential for a release to ground water and surface water. The probability of a release to the air was low, because the waste oils did not contain any volatile organic compounds.

Recommendations: No further action is recommended at this time.

SWMU 8 Former Waste Oil Drip Pans

Conclusions: This unit managed waste oil from pump and valve manufacturing machines. This unit is no longer in use, and the current potential for release is nonexistent. The former potential for release to ground water, surface water, and on-site soils was low because the unit was located indoors. A spill would not have been likely to leave the building and migrate outdoors. The probability of a release to the air was low because the oil did not contain volatile organic compounds.

Recommendations: No further action is recommended at this time.

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SWMU 9 Former Waste Oil Underground Storage Tank

Conclusions: This unit managed waste oil generated from pump and valve manufacturing machines. The tank was removed in 1980, and the potential for further releases from the unit is nonexistent. The former potential for release to on-site soils and ground water was low to moderate. Because the

tank was underground, it would have been difficult to assess its integrity. A release may have occurred prior to or at the time of removal. No removal documentation is currently available, so it is not known whether sampling was conducted at the time of removal. If a release to soils occurred, such a release may have migrated to ground water. The former release potential to surface water was low. A release would not have been likely to migrate 3 miles to the nearest surface water, the Rouge River. The former potential for release to the air was low because the waste oil did not contain volatile organic compounds.

Recommendations: Obtain documentation of clean closure of the unit. If this is not possible, conduct soil sampling for evidence of contamination. If contamination of soil is present in significant amounts, conduct ground-water sampling for evidence of contamination.

SWMU 10 Former Satellite Solvent Accumulation Area

Conclusions: This unit managed waste solvents (F001, F003, D001) generated during parts cleaning of the pump and valve manufacturing machines. The areas are no longer in use, and the current potential for release is nonexistent. The former potential for release to the ground water, surface water, and on-site soils was low, because the unit was indoors. A spill would not have been likely to leave the building and migrate outdoors. It is not possible to determine the former potential for release to the air, because it is not known if the drums were always stored closed. If they were, the potential would have been low.

Recommendations: No further action is recommended at this time.

SWMU 11 Scrap Metal, Plastics, and Foams Dumpster

Conclusions: This unit manages scrap metal, plastics, and foams generated from fatigue testing of parts. The unit is located outdoors on concrete. Because of the inert quality of the waste, the potential for release to on-site soils, ground water, surface water, and air is low.

Recommendations: No further action is recommended at this time.

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AOC 1

Former Underground Fuel Oil Storage Tank Areas

Conclusions:

These two 20,000-gallon tanks managed product fuel oil and were located underground. According to Sperry-Vickers facility representative, they were removed in 1986. A cursory visual inspection indicated that removal was completed. However, no documentation detailing removal was available. The potential for future releases from the unit is nonexistent. The former potential for release to on-site soils, ground water, and air was low to moderate. Because the tanks were underground, it would have been difficult to access their integrity. A release may have occurred prior to or at the time of removal. It is not known whether sampling was conducted at the time of removal. If a release to soils occurred, such a release may have migrated to ground water and also may have escaped to the air. The former release potential to surface water was low. A release would not have been likely to migrate 3 miles to the nearest surface water, the Rouge River. Any releases to the air would have already volatilized.

Recommendations:

Obtain documentation detailing removal and sampling activities. If this is not possible, conduct soil sampling for evidence of contamination. If soil contamination is detected in significant amounts, conduct ground-water sampling for evidence of contamination.

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ATTACHMENT A

VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

VISUAL SITE INSPECTION SUMMARY

**Sperry-Vickers, Inc.
Troy, Michigan
MID 001 722 552**

Date: November 21, 1991

Facility Representatives: Jane Long, General Motors (GM)
David Tackman, GM
Dick Hagan, Sperry-Vickers

Inspection Team: Gabrielle Norkis, PRC Environmental Management, Inc. (PRC)
Celeste Brancel, PRC

Photographer: Celeste Brancel, PRC

Weather Conditions: Calm, overcast, temperature about 30°F

Summary of Activities: The visual site inspection (VSI) began at 10:20 a.m. with an introductory meeting. The inspection team discussed the purpose of the VSI and the agenda for the visit. Facility representatives then discussed Sperry-Vickers and GM's past and current operations, solid wastes generated, and release history. Most of the information was exchanged on a question-and-answer basis. GM provided the inspection team with copies of documents requested.

The VSI tour began at 11:30 a.m. PRC walked through the manufacturing portions of the facility and observed the areas where former underground storage tanks were located. PRC observed no visual evidence of release.

The tour concluded at 12:00 p.m., after which the inspection team held an exit meeting with GM facility representatives. The VSI was completed and the inspection team left the facility at 12:30 p.m.



Photograph No. 1

Orientation: Northeast

Location: SWMU 1

Date: 11/21/91

Description: Indoor Solvent Accumulation Area. Black drum with red label is partially full of waste solvent. Horizontal drums are filled with product solvent.



Photograph No. 2

Orientation: East

Location: SWMU 2

Date: 11/21/91

Description: Drip pans that collect oil beneath foam manufacturing machines



Photograph No. 3

Orientation: Northeast

Location: SWMU 3

Date: 11/21/91

Description: Red vented bucket containing waste paper towels and gloves inside SLA lab. Waste is transferred from this bucket to a larger plastic bucket (see Photograph No. 4).



Photograph No. 4

Orientation: East

Location: SWMU 3

Date: 11/21/91

Description: Larger plastic bucket containing waste paper towels and gloves inside SLA lab. Waste is transferred to here from the red vented bucket (see Photograph No. 3).



Photograph No. 5
 Orientation: Southwest
 Description: Bucket containing dirty rags

Location: SWMU 4
 Date: 11/21/91



Photograph No. 6
 Orientation: South
 Description: Outdoor Drum Storage Area. It receives waste from throughout the manufacturing area.

Location: SWMU 5
 Date: 11/21/91



Photograph No. 7
 Orientation: Southeast
 Description: Outdoor Drum Storage Area

Location: SWMU 5
 Date: 11/21/91



Photograph No. 8
 Orientation: East
 Description: Former Indoor Waste Oil Accumulation Area, now part of office cubicles

Location: SWMU 6
 Date: 11/21/91



Photograph No. 9

Location: SWMUs 7 and 11

Orientation: West

Date: 11/21/91

Description: Former Empty Oil Drum Storage Area was located where pallets are stacked in this photograph. Scrap Metal, Plastics, and Foams Dumpster (SWMU 11) is located behind the pallets.



Photograph No. 10

Location: SWMU 9

Orientation: West

Date: 11/21/91

Description: Gravel-filled area is where the Former Waste Oil Underground Storage Tank was located.



Photograph No. 11

Orientation: South

Description: Location of one of the former 20,000-gallon underground fuel oil storage tanks

Location: AOC 1

Date: 11/21/91



Photograph No. 12

Orientation: East

Description: Location of one of the former 20,000-gallon underground fuel oil storage tanks

Location: AOC 1

Date: 11/21/91

ATTACHMENT B
VISUAL SITE INSPECTION FIELD NOTES

Spring 1961 11-21-91 ①
cloudy, calm, 30° 10:20 am

West - Michigan Bell
East - Airport, vacant land
North - H. T. & T. of brick building
South - ^{Body next to} plating company; Asher

Building → 30 years, prior vacant
unit between 1955-1960.
⇒ Vickers was 1st tenant
⇒ Gm was 2nd tenant
July, 1961

Gm occupies 212,000 sq ft
90000 office
property 212,000 building
mix polyall + isocyanate to
make it into foam

Basically foam dw.
isocyanates
polyall
G. Vickers

metylene chloride
water based solvents
in 55 gall. drums

have 2 tanks of polygal
of aqua

pump into lines & form a
reaction to make foam.

hydraulic oils for presses =>
waste oil goes to outdoor

storage area.
drip for oil removed by Great Lakes Enviro
moned to out door & taken out by Chem Waste
to solvent used to clean

parts & to acclim. in
satellite area.

J. Nolin

lines flexed by manufact.
instructions & put into
drums & put to outdoor
storage area.

Solid waste: unimp. floor
glass & metal scrap.

pieces: instrument panels,
trunk, trim door,
panels, component parts:
arm rest.

Scrap from moulds put into
gondola & general scrap.
Taken by Arrow Disposal,

Arrow
34093 op dd ocl
Kominer, Inc 4/3/74

SLA Lab

J. Nolin

⑥

taken by Chem. Waste.

⑤ They paper towel and
to clean run to
double bagged & put
into 30 gal plastic
put into 55 gal
into stor'g. area &
then Chem. Waste

Current gm RCPA status

Small quantity, Gen.

gm - no spills or movements

600 employees

security guard 24 hours
building fenced

nearest residences 1/4 mile

-g. hahn cart.

⑦

building built in 1956 -- 1989

did R & B on pumps & valves
water generated more solvent
in part cleaning. Waste
hydrofluoric acid.

oil storage -- new & used
hay waste --

impurities outdoor on pallets outdoor.

Nov. 1980 -- 7,500 gal
tank removed.

2 - 20,000 gal tanks for
fuel oil for diesel
oil. These were removed
in 1986.

-g. hahn

⑧

Acidant stored & sent out for
recycling.

oil sent out for re-use.
hydrogenic
oil storage in door 15 x 25.
accumulated up to 6 drums
& removed to storage area
& taken out.

this was locked
out building was locked as
well.

Aluminum, fire protection.

#1 on concrete

#2 on concrete 30 feet away
from drums

G. Nalin

⑨

#3 former 5,000 gall.
water well.

#4 former removed fuel oil

#5 former removed fuel oil

former oil

#6 empty drum storage
rent of out for re-use.

bag waste \rightarrow concrete wall
w/ grating over. Locked
slayed to debris area
well maintained.

1 drum of mixture of
drip pan oil from
barren.

G. Nalin

(11)

rag. nato - to Chem. Waste

G. Nalin